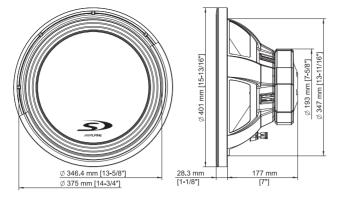
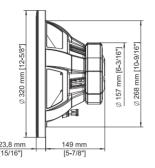
SWS-15D2 SWS-15D4



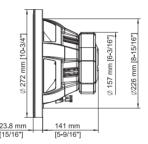
SWS-12D2 SWS-12D4





SWS-10D2 SWS-10D4





# 

ALPINE ELECTRONICSMARKETING,INC. 1-7 Yukigaya-otsukamachi, Ota-ku, Tokyo 145-0067, Japan Tel: (03) 5499-4531

ALPINE ELECTRONICS OF AMERICA, INC. 19145 Gramercy Place, Torrance, California 90501, U.S.A.
Tel: 1-800-ALPINE-1 (1-800-257-4631)

ALPINE ELECTRONICS OF CANADA, INC. 777 Supertest Road, Toronto, Ontario M3J 2M9, Canada Tel: (416) 736-6211

ALPINE ELECTRONICS OF AUSTRALIA PTY. LTD. 161-165 Princes Highway, Hallam Victoria 3803, Australia Tel: (03) 8787-1200

ALPINE ELECTRONICS DE ESPAÑA, S.A. Portal de Gamarra 36, Pabellón 32 01013 Vitoria (Álava). APDO. 133, Spain Tel: (945) 283-588

ALPINE ELECTRONICS GmbH Wilhelm-Wagenfele-Straße 1-3 80807 München, Germany Tel: (089) 324-2640

ALPINE ELECTRONICS (Benelux) GmbH Leuvensesteenweg 510-B6 1930 Zaventem, Belgium Tel: 02-7251315 ALPINE ELECTRONICS OF U.K., LTD. Alpine House Earlplace Business Park, Fletchamstead Highway, Coventry CV4, 9TW United Kingdom Tel: (2476) 719-500

ALPINE ELECTRONICS FRANCE S.A.R.L. 98,Rue de la Belle Etoile, Z.I. Paris Nord, B.P. 50016, 95945, Roissy Charles de Gaulle Cédex, France Tel: (01) 4863-8989

ALPINE ITALIA S.p.A. Viale C. Colombo 8, 20090 Trezzano Sul Naviglio (MI), Italy Tel: (02) 484-781

Printed in CHINA



# TYPE-S SUBWOOFER HAUT-PARLEUR D'EXTRÊMES GRAVES TYPE-S APPLICATION GUIDE GUIDE D' APPLICATION

SWS-15D4

15 Inch Dual Voice Coil Subwoofer ( $4\Omega$ )+( $4\Omega$ ) Haut-parleur d'extrêmes graves à double bobine 15 po ( $4\Omega$ )+( $4\Omega$ )

SWS-15D2

15 Inch Dual Voice Coil Subwoofer  $(2\Omega)+(2\Omega)$ Haut-parleur d'extrêmes graves à double bobine 15 po  $(2\Omega)+(2\Omega)$ 

SWS-12D4

12 Inch Dual Voice Coil Subwoofer ( $4\Omega$ )+( $4\Omega$ ) Haut-parleur d'extrêmes graves à double bobine 12 po ( $4\Omega$ )+( $4\Omega$ )

SWS-12D2

12 Inch Dual Voice Coil Subwoofer ( $2\Omega$ )+( $2\Omega$ ) Haut-parleur d'extrêmes graves à double bobine 12 po ( $2\Omega$ )+( $2\Omega$ )

SWS-10D4

10 Inch Dual Voice Coil Subwoofer ( $4\Omega$ )+( $4\Omega$ ) Haut-parleur d'extrêmes graves à double bobine 10 po ( $4\Omega$ )+( $4\Omega$ )

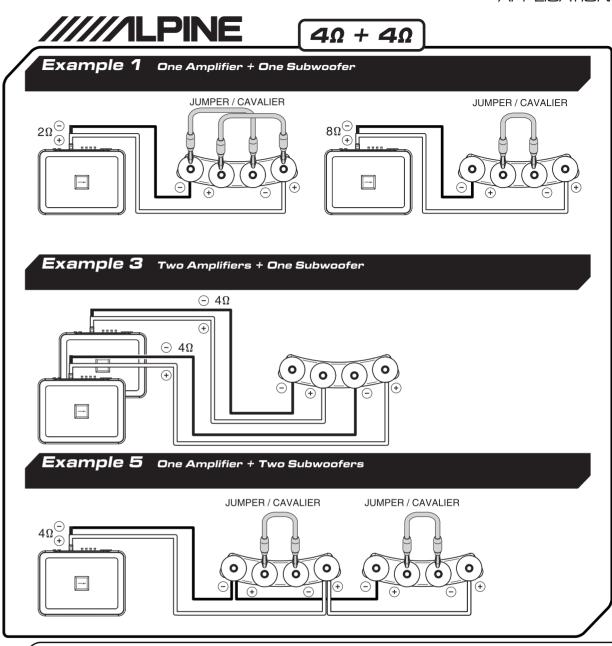
**SWS-10D2** 

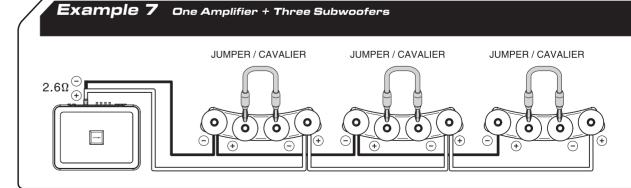
10 Inch Dual Voice Coil Subwoofer  $(2\Omega)+(2\Omega)$ Haut-parleur d'extrêmes graves à double bobine 10 po  $(2\Omega)+(2\Omega)$ 

Gonoral	Sn	ocifications		
General Specifications				
Sealed		Taille		
Frequency Response		Response en Fréquence		
Power Range		Plage de Puiss	sance	
Power Handling		Puisance Admissible		
Magnet Weight		Poids de l'aimant		
Voice Coil Diamete	er	r Diamètre de la t		
Thiel-Small Parameters				
Sensitivity (1W/1m)	Sensibilité (1W/1m)		SPL	
DC Resistance	Résistance CC		Re	
Inductance	Inductance		Le	
Free Air Resonance	Résonance à l'air libre		Fs	
Equivalent Stiffness	Raiduer équivalente		Vas	
Mechanical Q	Q Méchanique		Qms	
Electrical Q	Q Électrique		Qes	
Total Q	Q Total		Qts	
Cone Area	Surface du diaphragme		Sd	
Linear Excursion	Displacement Linéare		Xmax (1-way)	
Mechanical Travel	Déplacement Mécanique		Xmech (P-P)	

Type-S						
SWS-10D2	SWS-10D4	SWS-15D2	SWS-15D4			
<b>2</b> Ω <b>+2</b> Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	<b>2</b> Ω <b>+2</b> Ω	4Ω+4Ω	
10"		12"		15"		
28Hz-200Hz		26Hz-200Hz		24Hz-200Hz		
	15	50W-500W F	RMS (efficad	ce)		
	500W RMS	(efficace) /	1500W PEA	k (de crête)	)	
64	OZ	64	OZ	106 oz		
65.5 mm (2.6")						
85.1dB	85.5 dB	86.4 dB	86.5 dB	88.5 dB	88.7 dB	
1.8Ω+1.8Ω	3.5Ω+3.5Ω	1.8Ω+1.8Ω	3.5Ω+3.5Ω	1.8Ω+1.8Ω	3.5Ω+3.5Ω	
1.87 mH	4.84 mH	1.87 mH	4.84 mH	1.87 mH	4.84 mH	
35 Hz		34 Hz		27 Hz		
25	25 L 44 L		107 L			
7.54	8.65	8.37	9.43	7.69	8.57	
0.52	0.49	0.66	0.6	0.51	0.46	
0.49	0.46	0.61	0.57	0.48	0.44	
333 cm <sup>2</sup>		479 cm²		779 cm²		
15 mm						
64 mm		64 mm		68 mm		

Note: Specifications subject to change without notice



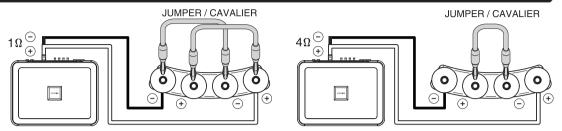


DIAGRAMS

 $2\Omega + 2\Omega$ 

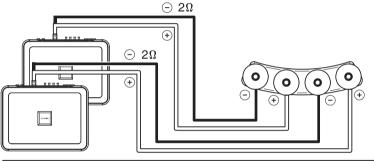
SWS-10D4/SWS-12D4/SWS-15D4 SWS-10D2/SWS-12D2/SWS-15D2

# Example 2 One Amplifier + One Subwoofer

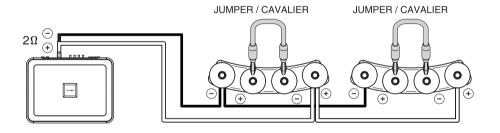


Caution ! Consult amplifier owner's manual for  $1\Omega$  connection. Attention : lire le manuel de l'amplificateur pour la connexion à  $1\Omega$  .

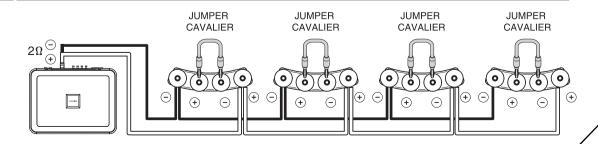
### Example 4 Two Amplifiers + One Subwoofer



# Example 6 One Amplifier and Two Subwoofers



# Example 8 One Amplifier + Four Subwoofers



TYPE-S WIRING WORKSHEET CÂBLAGE POUR TYPE-S

		SWS-10D2/D4	SWS-12D2/D4	SWS-15D2/D4
Sealed Box Range	Net Internal Volume	0.5-0.85 ft <sup>3</sup>	0.65-1.0 ft <sup>3</sup>	1.25-2.0 ft <sup>3</sup>
	External Box Dimensions	12"x12"x10"	14"x14"x11.5"	16"x16"x12.5"
Recommened	Gross Internal Volume	0.54 ft³	0.90 ft <sup>3</sup>	1.34 ft³
Sealed Box	Net Internal Volume	0.50 ft <sup>3</sup>	0.85 ft³	1.27 ft³
	F3, Qtc	D2: 54 Hz, 0.78 D4: 54 Hz, 0.73	D2: 47 Hz, 0.96 D4: 49 Hz, 0.91	D2: 46 Hz, 0.91 D4: 48 Hz, 0.83
	Net Internal Volume	0.75-1.3 ft <sup>3</sup>	1.0-1.5 ft <sup>3</sup>	2.0-3.0 ft <sup>3</sup>
Vented Box Range	Tuning	35-39Hz	32-37Hz	28-32Hz
	External Box Dimensions	21.5"x12"x11.5"	22.5"x12.5"x14"	25"x15.5"x17.5"
	Gross Internal Volume	1.22 ft³	1.67 ft³	3.05 ft³
	Vent Area (dimensions)	10in <sup>2</sup> (10"x 1")	12.5in <sup>2</sup> (12.5"x 1")	20in <sup>2</sup> (16"x 1.25")
Recommened	Vent length	18"	18"	21"
Vented Box	Vent Displacement	0.18 ft <sup>3</sup>	0.22 ft <sup>3</sup>	0.38 ft <sup>3</sup>
	Net Internal Volume (Vb)	1.0 ft <sup>3</sup>	1.4 ft <sup>3</sup>	2.6 ft <sup>3</sup>
	F3, ripple, Fb	D2: 32Hz, 3.1dB, 38Hz D4: 32Hz, 2.5dB, 38Hz	D2: 32Hz, 4.4dB, 36Hz D4: 31Hz, 4.1dB, 36Hz	D2: 29Hz, 3.1dB, 31Hz D4: 29Hz, 2.6dB, 31Hz

### Notes:

1) Recommended enclosure net Internal volume is based upon 3/4" (19mm) MDF enclosure construction.

2) Consult the table below for alternative enclosure net internal volume calculation.

Front Mount Displacement* (magnet in)	-0.04 ft <sup>3</sup>	-0.06 ft <sup>3</sup>	-0.07 ft <sup>3</sup>
Reverse Mount Added Volume* (magnet out)	+0.06 ft <sup>3</sup>	+0.08 ft <sup>3</sup>	+0.15 ft <sup>3</sup>

\*Based upon 3/4" (19mm) baffle thickness, with opening cut approximately to gasket inner diameter

		SWS-10D2/D4	SWS-12D2/D4	SWS-15D2/D4
Gamme Box Sealed	Net volume interne	0.5-0.85 pi <sup>3</sup>	0.65-1.0 pi <sup>3</sup>	1.25-2.0 pi <sup>3</sup>
	Dimensions extérieures	12 po x12 po x10 po	14 po x14 po x11.5 po	16 po x16 po x12.5 po
recommened	Volume intérieur brut	0.54 pi³	0.90 pi <sup>3</sup>	1.34 pi³
Boîte Scellé	Volume intérieur Net ***	0.50 pi <sup>3</sup>	0.85 pi³	1.27 pi <sup>3</sup>
	F3,Qtc	D2: 54 Hz, 0.78 D4: 54 Hz, 0.73	D2: 47 Hz, 0.96 D4: 49 Hz, 0.91	D2: 46 Hz, 0.91 D4: 48 Hz, 0.83
Gamme charge	Volume net interne	0.75-1.3 pi <sup>3</sup>	1.0-1.5 pi <sup>3</sup>	2.0-3.0 pi <sup>3</sup>
bass-reflex	mise au point	35-39Hz	32-37Hz	28-32Hz
	Dimensions extérieures	21.5 po x12 po x11.5 po	22.5 po x12.5 po x14 po	25 po x15.5 po x17.5 po
	Volume intérieur brut	1.22 pi³	1.67 pi³	3.05 pi³
	Aire de l'évent (dimensions)	10in² (10 po x 1 po)	12.5in² (12.5 po x 1 po)	20in² (16 po x 1.25 po)
recommened charge bass-reflex	Longueur de l'évent	18"	18"	21"
	déplacement de l'évent	0.18 pi <sup>3</sup>	0.22 pi <sup>3</sup>	0.38 pi <sup>3</sup>
	Volume intérieur Net (Vb)***	1.0 pi <sup>3</sup>	1.4 pi³	2.6 pi³
	F3, crête, Fb	D2: 32Hz, 3.1dB, 38Hz D4: 32Hz, 2.5dB, 38Hz	D2: 32Hz, 4.4dB, 36Hz D4: 31Hz, 4.1dB, 36Hz	D2: 29Hz, 3.1dB, 31Hz D4: 29Hz, 2.6dB, 31Hz

### Notes

1) Recommandé enceinte volume net interne est basée sur 3/4 "(19mm) de construction boîtier en MDF.

2) Consulter le tableau ci-dessous pour le calcul de filet d'enclos altemative volume interne.

Avant le déplacement du Mont * (aimant)	-0.04 ft <sup>3</sup>	-0.06 ft <sup>3</sup>	-0.07 ft <sup>3</sup>
Inverser Volume mont Ajouté * (des aimants)	+0.06 ft <sup>3</sup>	+0.08 ft <sup>3</sup>	+0.15 ft <sup>3</sup>

\* Sur la base de l'épaisseur du déflecteur 3/4" (19mm), avec une ouverture coupée à peu près à joint diamètre intérieur

